

STATUS OF CLAIMS

1-5 (canceled)

6. (previously presented) A method for monitoring biological micro-structure activity which produces detectable signals characterizing events, comprising the steps of estimating the fundamental frequency of the occurrence of events from the detectable signals, without detecting the occurrence of individual events, wherein the estimating step includes an autocorrelation operation.

7. (original) The method of claim 6 further including one of the following steps:

estimating the fundamental frequency based upon a lower autocorrelation value disposed among several adjacent peaks;

treating "unvoiced" segments of the detectable signal as undecided as to pitch and estimating the pitch of those segments through subsequent processing;

seeking to estimate the fundamental frequency in the range of .25 to 5 Hertz;

utilizing an analysis window duration in the range of several seconds;

performing a pre-processing operation which has the effect of increasing the effective duration of an event; and

utilizing an autocorrelation process which performs segmented autocorrelation.

8. (previously presented) A method for monitoring biological micro-structure activity which produces detectable signals characterizing events, comprising the steps of estimating the fundamental frequency of the occurrence of events from the detectable signals, without detecting the occurrence of individual events, further comprising the step of using the number of "unvoiced" windows within a predetermined time as a measure of a blood constituent level of a patient.

9. (previously presented) A method for monitoring biological micro-structure activity which produces detectable signals characterizing events, comprising the steps of estimating the fundamental frequency of the occurrence of events from the detectable signals, without detecting the occurrence of individual events, further comprising the step of using a sureness grade as measure of a blood or tissue constituent level of a patient.

10-15 (canceled)

16. (previously presented) In a system for monitoring biological micro-structure activity which produces detectable signals characterizing events, a sensor capable of receiving the sensible signals and a processor including a module for estimating the fundamental frequency of the occurrence of events from the detectable signals, without first detecting the occurrence of individual events, wherein the processor further comprises a module for producing an analysis window during which events are analyzed, the analysis window spanning more than one event, wherein the module for estimating includes components to perform an autocorrelation operation.

17. (previously presented) The system of Claim 16 wherein the module for estimating further includes one of the following submodules:

a submodule which estimates the fundamental frequency based upon a lower autocorrelation value disposed among several adjacent peaks;

a sub-module which identifies "unvoiced" segments of the detectable signal as undecided as to pitch, the pitch of those segments being estimated by a subsequent processing submodule;

a submodule which controls the estimate of the fundamental frequency to be in the range of .25 to 5 Hertz;

a submodule controlling the analysis window to have a duration in the range of several seconds; and

a submodule performing a pre-processing operation which has the effect of increasing the effective duration of an event.

18. (previously presented) In a system for monitoring biological micro-structure activity which produces detectable signals characterizing events, a sensor capable of receiving the sensible signals and a processor including a module for estimating the fundamental frequency of the occurrence of events from the detectable signals, without first detecting the occurrence of individual events, wherein the processor further comprises a module for producing an analysis window during which events are analyzed, the analysis window spanning more than one event, wherein the processor is constructed to perform a segmented autocorrelation process.

19-23 (canceled)

24. (previously presented) In a system for monitoring biological micro-structure activity which produces detectable signals characterizing events, a sensor capable of receiving the sensible signals and a processor including a module for estimating the fundamental frequency of the occurrence of events from the detectable signals, without first detecting the occurrence of individual events, wherein the module for estimating includes components to perform an autocorrelation operation.

25. (previously presented) In a system for monitoring biological micro-structure activity which produces detectable signals characterizing events, a sensor capable of receiving the sensible signals and a processor including a module for estimating the fundamental frequency of the occurrence of events from the detectable signals, without first detecting the occurrence of individual events, wherein the processor is constructed to perform a segmented autocorrelation process.

26 (canceled)

27. (previously presented) A method for monitoring biological micro-structure activity which produces detectable signals characterizing events, comprising the steps of estimating the fundamental frequency of the occurrence of events from the detectable signals, without detecting the occurrence of individual events, wherein events are analyzed during an analysis window which spans more than one event, wherein the estimating step includes an autocorrelation operation.